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Soybean Replanting and Fungicide Treatments

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This planting season, soils have been cool and wet with many fields being flooded, which reminds many of us of the planting season in 1993, also a flood year. In that year, many fields, or portions of fields, were under water for a long time. By this Monday (June 2), a significant portion of the soybean fields still had not been planted, varying by region. For the fields that have been planted, wet soil conditions are affecting the germination and stand establishment. At this week's teleconference, ISU agronomists reported that some fields are being considered for replant due to poor stand counts.

Poor stand establishment in many fields suggest that the pressure of seedling disease this season is quite high. despite more than half of Iowa soybean seeds having been treated with chemicals, according to an ISU survey done last year. Even with such a high

portion of seed being treated, we are still facing a much greater need to replant this year than in the last few years. This suggests that seed disease pressure this season is much higher than normal.

Why has there been so much damping off? The cool and wet soils definitely increase seedling diseases and contribute to the reduction of emergence rate as soybean seedling diseases such as *Phytophtora*, *Pythium* or *Rhizoctonia* occur in wet soils. Another very likely reason is due to the use of poor seed quality. Early this spring, ISU plant pathologists received many reports of seeds with relatively low germination rates.

We also have recieved reports of higher than normal occurrence of poor quality seed infected with *Phomopsis*. Use of Phomopsis infected seed can be fine when soils are not wet and cool. Use of such infected seed could result in low germination/emergence rates despite the seed treatment when soil conditions are favorable to the occurrence of fungal seed rot. This is one such season.

For these considering replanting, seed treatments with fungicides are highly recommended. It is my experience that if *Phyophthora* causes seedling damping off, more severe damping off would happen in the replanted soybeans unless the seed is treated with the right fungicides or the weather turns dry after replanting.

Since the weather forecast is for higher than normal rain for the next two to three weeks, it is not worth the risk to avoid using seed treatment in replant. Furthermore, as we are already in the first week of June, we cannot afford another replanting in term of yields. This also applies to land yet to be planted with soybean. It may be worth it to use treated seeds in those fields as well.

Fields which already have had seedling damping off have higher disease risk because the build up of the pathogen population from the previous damping-off. Therefore it is important to use of higher doses of fungicides for replanted soybean. This is especially true with *Phytophthora*.

Our data shows that in fields with severe *Phytophthora* infections, only treatments with high concentration of fungicide work. There are many fungicides available on the market to control seedling diseases. Make sure you use metalaxyl or mefenoxam if *Phytophthora* or *Pythim* are the problems. Also, if you have the option, select seeds with high germination rates.

XB Yang is a professor of plant pathology with research and extension responsibilities in crop diseases.

Category: Plant Diseases

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